WHAT IS CLAIMED IS:

1. A video signal processing method comprising steps of:

extracting a first predetermined frequency component in three-dimensional frequency space, from a luminance signal of a component video signal; and

eliminating a second predetermined frequency component from the luminance signal, according to the first predetermined frequency component value.

2. The video signal processing method of Claim 1 wherein the first predetermined frequency component is extracted by filtering the luminance signal in a horizontal direction with a filter having a pass-band of 3.58MHz, and further filtering the signal in a temporal direction with a filter having a pass-band of 15Hz.

3. The video signal processing method of Claim 1 wherein the second predetermined frequency component is obtained by filtering the luminance signal in a horizontal direction with a filter having a pass-band of 3.58MHz.

4. The video signal processing method of Claim 1 wherein the second predetermined frequency component is obtained by filtering the luminance signal in a horizontal direction with a filter having a pass-band of 3.58MHz, and further filtering the

signal in a temporal direction with a filter having a pass-band of 15Hz.

5. A video signal processing apparatus comprising:

a horizontal filter for receiving luminance signal components of a component video signal and filtering the same in a horizontal direction;

a time filter for filtering an output of the horizontal filter in a temporal direction;

a comparator for deciding whether an output of the time filter is equal to or larger than a predetermined threshold;

a gain adjuster for receiving the output of the horizontal filter, changing gain of the output of the horizontal filter according to a result of the comparator, and outputting an obtained result; and

a subtracter for subtracting an output of the gain adjuster from the luminance signal components.

6. A video signal processing apparatus comprising:

a filter for receiving luminance signal components of a component video signal and filtering the same in a horizontal direction and in a temporal direction;

a comparator for deciding whether an output of the filter is equal to or larger than a predetermined threshold;

a gain adjuster for receiving the output of the filter,

changing gain of the output of the filter according to a result of the comparator, and outputting an obtained result; and

a subtracter for subtracting an output of the gain adjuster from the luminance signal components.

7. The video signal processing apparatus of Claim 5 wherein the horizontal filter is a band-pass filter having a pass-band of 3.58MHz, and the time filter is a high-pass filter having a pass-band of 15Hz.

8. The video signal processing apparatus of Claim 6 wherein the filter is a filter having a horizontal pass-band of 3.58MHz and a temporal pass-band of 15Hz.

9. A video signal processing method comprising steps of:

extracting a first frequency component from luminance signal components of a component video signal;

obtaining a difference value of the luminance signal components between the present frame and an immediately preceding frame;

obtaining a difference value of color-difference signal components of the component video signal between the present frame and the immediately preceding frame; and

subtracting one-half of the difference value of the color-difference signal components between the present frame and

the immediately preceding frame from the color-difference signal components, or replacing the color-difference signal components with an average value of the present frame and the immediately preceding frame, when the first frequency component value of the luminance signal components is equal to or larger than a first predetermined value, the difference value of the luminance signal components between the present frame and the immediately preceding frame is equal to or smaller than a second predetermined value, and the absolute value of the difference value of the color-difference signal components between the present frame and the immediately preceding frame is equal to or larger than a third predetermined value.

10. A video signal processing method comprising steps of:

extracting a first frequency component from luminance signal components of a component video signal;

obtaining a difference value of the luminance signal components between the present frame and an immediately preceding frame;

obtaining a difference value of color-difference signal components of the component video signal between the present frame and the immediately preceding frame;

obtaining a difference value of the color-difference signal components between the present frame and a frame that is two frames before; and

subtracting one-half of the difference value of the color-difference signal components between the present frame and the immediately preceding frame from the color-difference signal components, or replacing the color-difference signal components with an average value of the present frame and the immediately preceding frame, when the first frequency component value of the luminance signal components is equal to or larger than a first predetermined value, the absolute value of the difference value of the luminance signal components between the present frame and the immediately preceding frame is equal to or smaller than a second predetermined value, the absolute value of the difference value of the color-difference signal components between the present frame and the immediately preceding frame is equal to or larger than a third predetermined value, and the absolute value of the difference value of the color-difference signal components between the present frame and a frame that is two frames before is equal to or smaller than a fourth predetermined value.

11. The video signal processing method of Claim 9 or 10 wherein the first frequency component is extracted by filtering the luminance signal components with a horizontal band-pass filter having a pass band of 3.58MHz.

12. A video signal processing apparatus comprising:

a filter for receiving luminance signal components of a

component video signal and extracting a first predetermined frequency component;

a first frame memory for storing the luminance signal components for one frame period;

a first subtracter for obtaining a difference value between the luminance signal components and an output of the first frame memory;

a second frame memory for storing color-difference signal components of the component video signal for one frame period;

a second subtracter for obtaining a difference value between the color-difference signal components and an output of the second frame memory;

a noise detector for receiving an output of the filter, an output of the first subtracter and an output of the second subtracter, and detecting noises;

a gain adjuster for receiving the output of the second subtracter, and changing gain of the output of the second subtracter according to a result of the detection by the noise detector; and

a third subtracter for subtracting an output of the gain adjuster from the color-difference signal components.

13. The video signal processing apparatus of Claim 12 wherein the filter is a horizontal band-pass filter having a pass-band of 3.58MHz, and

the noise detector decides that noises are detected, when the absolute value of the output of the filter is equal to or larger than a first predetermined value, the absolute value of the output of the first subtracter is equal to or smaller than a second predetermined value, and the absolute value of the output of the second subtracter is equal to or larger than a third predetermined value.

14. The video signal processing apparatus of Claim 12 wherein the gain adjuster changes the gain of the output of the second subtracter to one-half when noises are detected by the noise detector, and changes the gain to 0 when no noise is detected by the noise detector.

15. A video signal processing method by which dot crawls and time-axis noises are eliminated from luminance signal components of a component video signal, comprising steps of:

extracting a first predetermined frequency component from the luminance signal components in three-dimensional frequency space;

eliminating a second predetermined frequency component from the luminance signal components according to the size of the first predetermined frequency component when elimination of the dot crawls is designated; and

eliminating minute-level components varying in a temporal

direction when elimination of the time-axis noises is designated.

16. The video signal processing method of Claim 15 wherein the first predetermined frequency component is extracted by filtering the luminance signal components in a horizontal direction with a filter having a pass-band of 3.58MHz, and further filtering the signal components in a temporal direction with a filter having a pass-band of 15Hz.

17. A video signal processing method by which cross color interferences and time-axis noises are eliminated from color-difference signal components of a component video signal, comprising steps of:

eliminating minute-level components varying in a temporal direction of the color-difference signal components when elimination of the time-axis noises is designated;

obtaining a difference value of the color-difference signal components between the present frame and an immediately preceding frame when elimination of the cross color interferences is designated;

extracting a predetermined frequency component of luminance signal components of the component video signal;

obtaining a difference value of the luminance signal components between the present frame and the immediately preceding frame;

deciding that the cross color interferences are occurring when the absolute value of the difference value of the color-difference signal components between the present frame and the immediately preceding frame is equal to or larger than a first predetermined value, the absolute value of the predetermined frequency component of the luminance signal components is equal to or larger than a second predetermined value, and the absolute value of the difference value of the luminance signal components between the present frame and the immediately preceding frame is equal to or smaller than a third predetermined value; and

subtracting one-half of the difference value of the color-difference signal components between the present frame and the immediately preceding frame from the color-difference signal components, or replacing the color-difference signal components with an average value of the present frame and the immediately preceding frame, when it is decided that the cross color interferences are occurring.

18. The video signal processing method of Claim 17 wherein the predetermined frequency component of the luminance signal components is extracted by filtering the luminance signal components with a horizontal band-pass filter having a pass-band of 3.58MHz.

19. A video signal processing apparatus comprising:

a first subtracter for subtracting a first output of a noise detector from luminance signal components of a component video signal;

a first frame memory for storing an output of the first subtracter for one frame period;

a second subtracter for subtracting an output of the first frame memory from the luminance signal components;

a first filter for extracting a predetermined frequency component from the output of the first subtracter;

a second filter for extracting a predetermined frequency component from an output of the second subtracter;

a third subtracter for subtracting a second output of the noise detector from color-difference signal components of the component video signal;

a second frame memory for storing an output of the third subtracter for one frame period;

a fourth subtracter for subtracting an output of the second frame memory from the color-difference signal components;

a designation input means for inputting designation as to which noises among dot crawls, cross color interferences and time-axis noises are to be eliminated, from outside;

the noise detector for receiving the respective outputs of the first filter, the second filter, the second subtracter and the fourth subtracter, and the designation inputted by the designation input means as to which noises among dot crawls, cross

color interferences and time-axis noises are to be eliminated, deciding a third output on the basis of the respective outputs of the second filter and the first filter when elimination of the dot crawls is designated, deciding a second output on the basis of the respective outputs of the first filter, the second subtracter and the fourth subtracter when elimination of the cross color interferences is designated, deciding a first output on the basis of the output of the second subtracter and a second output on the basis of the output of the fourth subtracter when elimination of the time-axis noises is designated; and

a fifth subtracter for subtracting the third output of the noise detector from the output of the first subtracter.